



ARCTIC OCEAN

U.S.S.R.

Big Diomedes  
Little Diomedes

Kotzebue

Nome

ALASKA

U.S.S.R.  
U.S.

St. Lawrence Island

Anchorage

BERING SEA

GULF  
of  
ALASKA

PACIFIC OCEAN

# A Physician Visits Little Diomedede

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Little Diomedede is one of two small islands in the middle of the Bering Strait. These islands are the last remnants of what is believed to be an ancient land bridge between Asia and North America, a 2.2 square-mile craggy rock jutting 1,308 feet out of the Bering Sea. Little Diomedede is about 25 miles west of Cape Prince of Wales, the westernmost extension of the Alaskan mainland. It is only 2.4 miles from its larger sister island, Big Diomedede, which lies in Russian territory 25 miles east of the easternmost tip of Siberia. The islands mark the northernmost extreme of Vitus Bering's explorations.

The Public Health Service physicians stationed in Kotzebue, Alaska, make yearly visits to each of the 28 villages in the Kotzebue service unit. Thus, I had the privilege of visiting Little Diomedede twice during my 2 years at the Kotzebue hospital.

On the field trips, the physicians attempt to give each Alaska Native in a given village a physical examination. They make necessary surgical referrals to the hospital and follow up persons with tuberculosis, chronic otitis media, or other medical problems. They meet with the women to discuss prenatal and postnatal care, baby care, family planning, training of health aides, and other health concerns. They also meet with the village council to discuss such matters as radio communication between the village and the hospital and adequacy of drug supplies.

## Little Diomedede's People

Before and during my first visit, I learned a great deal about Little Diomedede from our X-ray technologist at the hospital, Jim Kiminoc, as well as from the island's teacher. Jim was born on the island and lived there until he was 14 years old. At that age, Jim, like the majority of Eskimos and Indians who successfully finish the eighth grade of school, went to high school at Mount Edgecumbe. Later, Jim worked for several months, primarily as a janitor, at the Public Health Service Alaska Native Medical Center in Anchorage. Then, for 4 years he was trained as an X-ray technician at the Staten Island Hospital in New York City. Jim is now with the Public Health Service hospital in Seattle, and hopes to eventually become an industrial radiologist.

In the 1950's Little Diomedede had about 129 Eskimo inhabitants, but now the number is about 80. These Eskimos are extremely self-reliant and independent. They also are clever, cunning, inventive, and very friendly. Having known the white man since the whaling days of the 1800's, they are quite aware of his customs. A number of the islanders moved first to the Alaskan mainland and then to the Lower-48 to become successful in various careers. I believe their rugged background and innate self-reliance have made them succeed where other Alaska Natives in similar situations have failed.

Until 1948 the Little Diomededes were equally at home in Alaska or Siberia. Several had been born on Big Diomedede, which formerly had two Eskimo villages with more than 300 inhabitants each. One Little Diomedede was a Siberian. In summer 1948, when a sizable group of Little Diomededes were attempting to return from Siberia via Big Diomedede

they were held prisoner for almost 6 weeks by the Russians stationed there and then released by international agreement. At this time also, the villages on the big island were evacuated and the natives moved to the Siberian coast.

Since 1948 the Eskimos on the little island have had no communication with their relatives to the west, and slightly more than half of the original population of Little Diomede has moved to the nearby village of Teller on Alaska's mainland. The most significant effect of this decrease in population, from a combined number of about 800 down to 80, sharply narrows the available genetic pool. In other words, since there are fewer available combinations for marriage and procreation, it is almost impossible to marry outside one's blood line. The Eskimos are keenly aware of this situation, and this factor alone may ultimately force the Little Diomeders to move to the mainland.

### **Flying to the Island**

Flying to either of the islands, Russian or American, is possible only in the winter months because their airstrips are on ice. There is no level area on Little Diomede—it looks like an upside-down ice cream cone formed of craggy rock. In summer, travel is by skin boat (unimac).

Jim, who had decided to visit his family for an hour or so before the plane took off, and I left for the island on a frigid but sunny February morning in a Cessna-180 piloted by Joe Felder. Since Joe, an excellent bush pilot, had flown to Little Diomede many times he was familiar with both the area and the landing conditions.

Most of Joe's flying experience had been in the Nome-Kotzebue-Barrow area on missions for the U.S. Naval Experimental Ice Island, a scientific ice island presently around the North Pole with 50 scientists in residence. He pointed out some difficulties we might encounter in landing between the Diomedes—poor visibility and too great a cross-wind preventing our landing because a plane can land in only a north-south direction. The Bering Strait is one of the most treacherous regions in the Arctic because of sudden windstorms and whiteouts.

Approaching the Diomedes at about 2,000 feet; we could clearly see the Alaskan coast to our left and the Siberian coast on the right. Below us was a vast expanse of snow-covered ice and occasional leads of blue water. As we slowly descended over a herd of about 10 walrus, they took off for the ocean. Leveling between the islands, we made our approach on the Big Diomede side of the narrow strait. The lower we dropped the more we became aware of a cross-wind, by both the feel of the plane and the direction of the loose snow blowing across the ice.

Closing in under a mile, the islands appeared as two massive bergs jutting out of an otherwise extremely flat, barren panorama. Joe pointed first to a tiny speck on Big Diomede which he said was a Russian lookout station and to a slightly larger speck, or small cluster of specks to the left which were the homes of the Little Diomeders. We made a large looping circle between the islands to get a good picture of the craggy airstrip which the Little Diomeders had chopped out of the rough ice. The runway was marked with 55-gallon oil drums.

The distant hum of our engines had already brought many of the Diomeders to the airstrip to meet us. On our second time around, Joe flew a little farther south before making his final approach, this time coming in slightly out of phase with the airstrip and angling into the wind. Just as we approached the end of the airstrip, he turned with almost a flicking motion into the axis of the airstrip and made a perfect landing on the roughest strip I had ever encountered. This is why the Alaskan bush pilot is revered by many as among the finest. To Joe this was little more than a routine landing, but to me it was a thrilling experience.

### **On to the Clinic**

As the door of the plane opened, we were instantly greeted by a group of laughing Eskimo children shouting "Hi doctor, glad to see you!" and welcoming Jim, their long-absent island brother. Jim's parents were also there. One man in the crowd was Davis Mendalook, the village health aide with whom I had often spoken by shortwave radio. The older children picked up my medical supplies and luggage and escorted me to the clinic which had been recently built by Protestant missionaries.

After looking at the 5-room clinic and deciding where we would perform the various examinations, including pelvic and Papanicolaou smears for the women, routine physical examinations, and eye refractions for anyone who needed them, Davis took me to the school and introduced me to the teacher. It is the custom for the visiting physician to have his meals and sleep in the teacher's quarters.

### **Physicals and Advice**

Following a quick lunch, we began to examine patients and then decided that the best procedure would be to have the children return with their families so that they could be examined as a unit and their medical problems would be considered together. This system worked well, except that some adults could not make it to the clinic because an earlier plane had unloaded a shipment of liquor. The problem of alcohol drinking among the native people is not a new one, and it is probably the greatest weakness of my friends on Little Diomede. They



*Little Diomeders are anxious to see what the plane has brought*

*The village of Little Diomede*





*Dr. Weider examines children*

abstain for 7 months a year, mainly because no liquor is available. When it does become available, however, the Little Diomeders will drink regardless of who is a guest on the island. My initial resentment was overruled by compassion, and I told Davis I would visit anyone unable to come to the clinic for health reasons, but today's intoxicated people could sober up to come to the clinic tomorrow if they wished to see me.

During the first afternoon we examined most of the children and women, including pelvic examinations and Papanicolaou smears. There were several pregnant women and some who had recently delivered. I took extra time with these women to discuss prenatal, postnatal, and child care. In Alaska, we place great emphasis on child care, particularly during the first 2 years of life when many medical problems originate. A major problem is otitis media which becomes chronic and is estimated to affect 60 percent or more of Alaska's population.

While I was in Alaska, from 1965 to 1967, it was becoming statistically apparent that if a child were free of otitis media during the first 2 years of life he probably would never be seriously affected by the disease. We found the same to be true of pneumonitis and pneumonia. Therefore, we stressed good nutrition, including administration of vitamins and iron drops, and early reporting of upper respiratory infections to the health aide. Thus, the child would have a far greater chance of maturing without a hearing loss of 30-40 decibels, which is quite common among college-age Eskimos in Alaska.

### **Eye Refractions**

After a dinner break, Davis and his daughter joined me at the clinic to do eye refractions. Eyesight among the Eskimos is about the same as among

non-natives in Alaska. About the same proportion need eyeglasses. The Eskimos, however, have other problems which are not generally observed in the non-native population. Most notable of these is phlyctenular keratoconjunctivitis, a scarring of the cornea which becomes progressive and damages the sight if not treated. The cornea also becomes quite vascular and not amenable to corneal transplant. Keratoconjunctivitis is most common among persons with tuberculosis, and a relationship, perhaps auto-immune, is believed to exist between these diseases.

Another problem of Eskimos, perhaps slightly greater than that of their non-native counterparts, is that of narrow-angle glaucoma. The Eskimo, essentially an Oriental, has the narrow anterior chamber of the Oriental and thus is slightly more susceptible to glaucoma. A number of Eskimos on Little Diomedede had glaucoma and were being treated, mainly with eyedrops. Because of these conditions, when there is abnormal difficulty in refracting or when a patient complains of pain or headache, the eyes are carefully examined by funduscope, and tonometry is done to measure the intraocular pressure. On several occasions I detected early cases of narrow-angle glaucoma and immediately referred the patients to the Alaska Native Medical Center in Anchorage.

Eye refractions in an Eskimo village are a great social event. Almost all the people turn out whether or not they need eyeglasses. They like to watch the doctor juggle the test lenses, and some like to watch a shy child gather enough courage to read the eye chart for the strange doctor.

One habit of the Eskimos, which I consider admirable but which becomes a hindrance in doing eye tests, is that the children are taught to whisper

indoors because of the large families and the small homes—if they did not, bedlam would prevail. Thus, they frequently whisper when reading the eye chart—a frustrating situation for a tired doctor in a noisy room. However, with the help of a brother or sister we usually get the child to speak in a loud whisper. When a refraction was completed, I would repeat the formula to Davis who would write a prescription. The patient would select a frame from Davis' daughter and mail it to the Alaska Department of Health and Welfare, which would later mail the eyeglasses to the patient. From about 7:15 to 11:45 that evening we did about 25 eye refractions and examined several more people.

### **Discussions With the People**

At midnight we met with the president and several other members of the village council to discuss health care problems on the island. A major problem was nightly radio communication with Kotzebue. This was not always possible because of distance and weather conditions. When the shortwave radio was out, communications had to take place through an intermediary such as another village closer to Kotzebue. We discussed converting the present (1966) shortwave system to a single-sideband system. I believe this has since been accomplished. Another island problem was getting a sufficient supply of drugs for the long winter season.

The next morning I thoroughly inventoried the pharmacy, and Davis and I made up a list of supplies to be sent when I returned to Kotzebue. Then at 8:15 I met at the schoolhouse with the 7- to 14-year-olds to answer questions written by some of the older children concerning health problems and to show them slides of blood cells and various types of bacteria.

Some of the more interesting questions had to do with blood circulation, how oxygen gets into the blood, and how germs make us sick. I answered in fundamental terms, using the blackboard as an aid. I was gratified by the interest and comprehension of the older children. In many respects it is easier to discuss basic anatomy with an Eskimo child who, having helped to clean many seals and walrus, really knows what the lungs, heart, and stomach are. They also were greatly interested in seeing the tubercle bacillus through a microscope for the first time—only a few years earlier this bacterium was their deadly enemy.

### **Chest Clinic**

After this meeting, Davis and I visited a few persons we had not seen the previous day, and then I conducted a routine chest clinic for those who had had tuberculosis and needed followup with both chest films and sputum examinations

annually. Those who showed evidence of breakdown in a scarred area were started on a year of isoniazid (INH) and para-aminosalicylic acid (PAS). Those with evidence of a new cavitory lesion or with positive sputum cultures were sent to the Kotzebue hospital for triple therapy with INH, PAS, and intramuscular streptomycin. A most important reason for getting patients to attend the chest clinic is that emphasis can be placed on taking the medication if their tuberculous status is questionable.

Generally, the tuberculous Eskimos take their medication faithfully, because many have had close friends or family members who died of the disease. Because of the excellent program initiated jointly by the Alaska Department of Health and Welfare and the Public Health Service, most new cases of tuberculosis are detected early, and the patients are treated immediately. Death is no longer the byproduct.

### **Birth Control**

In addition to the foregoing, I also saw a number of women interested in birth control and, more specifically, the insertion of intrauterine contraceptive devices. Birth control has become of major importance to Alaska Natives. In the past when an Eskimo had, say, 10 children, perhaps four or five died in infancy. Now, with survival statistics so improved, many families with a large number of children are in a financial bind.

Today's Eskimo lives in a cash economy as well as the hunting and trading one of the past. Money is needed for bullets for the guns and outboard motors as well as for other items of food and clothing now commonly used. Families with many children suffer an extreme economic burden, and thus they become interested in birth control. I inserted two IUD's and gave oral contraceptives to several other women. The IUD's gained in popularity while I was in Alaska, primarily because weather conditions sometimes delayed planes carrying supplies of pills.

### **Visits to Shut-ins**

My final task of the morning was to visit two shut-ins. The first was an old man whose left side was completely paralyzed as a result of a stroke the previous year. His small stone house was partly carved out of a cliff. I stooped to enter a 4½-foot entrance into a 4- by 8-foot outer room used for storage of outboard motors, guns, and meat. The odor of drying seal in the room was similar to that of smoked salmon. Since the seal eats fish almost exclusively, his meat smells and tastes somewhat like fish.

I climbed an 8-foot ladder to enter the house's only other room, about 10 by 14 feet, which had

a glass window at the top for ventilation. This room housed nine people—three adults and six children. Because of its small size, it was adequately heated by a two-burner Coleman stove. On a small table was a Zenith transoceanic radio (a common household item in Alaska), a sugar bowl, and a picture of the oldest son, in Navy uniform, who was currently off the coast of Vietnam. Other family pictures were tacked on the wall, and a Coleman lantern hung from the ceiling. Sleeping rolls were stacked against a wall, and the patient was on the only cot in the room. I was greeted cordially by everyone in the house.

Although the gaunt old man had been semi-paralyzed for more than a year, amazingly he had no bedsores or signs of pressure necrosis. His daughter-in-law told me that they had been carefully turning him so that he would not lie in one position, sitting him up, and giving him minimal exercises to keep his functional joints somewhat limber. All this was done instinctively! Such care was in marked contrast to instances I encountered in medical school and during internship where patients had been allowed to “fall apart” because their families did not provide minimal care. Obviously, this patriarch was greatly respected by his family, and in some respects was still considered head of the household. My examination revealed that his physical condition was relatively good for his age and condition.

Coffee was served when the examination was finished, and I chatted a bit with the family.

My next shut-in was the father of the village council president, John Iyapana. John's home looked much the same as the first one, with the addition of an electric light hanging in the middle of the room beside the Coleman lantern and a “hi-fi” with two speakers in the corners. These appliances were run by a generator conveniently placed beside the door. I could hear John pulling the rope on the generator, and shortly the stereo was playing a contemporary tune. I was as surprised as John intended me to be.

John's father was the oldest man in the village, over 80. He had been the village shaman (priest-doctor) before modern medicine was brought to the island, a position which he reluctantly released to the medical men. Still quite alert, his major affliction was Pott's disease, tuberculosis of the spine. He was still able to walk a bit, but the winter weather and perilous footing kept him indoors most of the time. I examined him and checked his medication. It is the custom to treat victims of Pott's disease with izoniazid for 3 months every 3 years because of possible reactivation.

I must have impressed the patriarch with my concern for him and my interest in his home, for he

digressed and told me some stories of the old whaling days. Because I have a deep historical and archaeological interest in the Eskimos of Alaska, I considered this a rare treat. Old timers such as Mr. Iyapana are becoming fewer daily.

### Ready for Take-Off

After having coffee at the Iyapana's, I returned to the clinic to pack and watch for the plane that I hoped would appear. Davis and his daughter greeted me at the clinic, and several villagers appeared with last-minute questions and requests—more than I heard on any other field trip during my 2 years in Alaska. There were some who had not come to be examined earlier, and others who had been too shy to ask certain questions earlier brought them up now. I answered all to the best of my ability.

I had lunch at the school with the teacher, and then I took some pictures. I do not like to take pictures as soon as I come to a new place, because the people may get the impression that the physician is primarily interested in adventure or photography rather than their medical care.

It was a sunny day and, although a little windy, I was fairly confident that the plane would arrive. About 2 p.m. we heard the distant hum of Joe's Cessna, and soon it was again on the ground surrounded by most of the village's children. My medical supplies and other belongings were loaded in the plane. I bid my final goodbyes and thanks, particularly to Davis and the school teacher for their help and hospitality.

As Joe and I headed for Kotzebue, the hum of the plane and the beautiful desolation of white and blue below put me into a relaxed, almost trance-like, state—a marked contrast to the preceding hectic work-filled hours. My emotions were mixed, and perhaps cannot be entirely expressed, but I could not help but feel a deep sense of admiration for the Little Diomeders whose lives are spent on a craggy rock isolated in the Arctic sea. I also could not help but wonder what the future held for this mighty little band.

